

ABSTRACT

The invention provides a wind power generator which can further improve a power generating efficiency. The wind power generator in accordance with the present invention is provided with an approximately cylindrical duct (10) with the side section thereof having a wing-like shape, an impeller (30) constructing a front end portion of a streamlined pencil body (20) coaxially installed with the duct and capable of rotating by a force of wind flowing in an inner portion of the duct (10), and a power generator (40) converting a rotational energy of the impeller (30) into an electric energy. A maximum wing thickness position (108) is positioned nearer a leading edge (102) than a center of a chord (106) in the side cross-sectional wing-like shape of the duct (10). Further, the chord (106) is tilted with respect to a duct axis in such a manner that an outer diameter of the duct (10) is made approximately uniform at least in a rear portion of the duct. The pencil body (20) is installed such that a front end portion is positioned in a rear side of a front end portion of the duct (10) and a rear end portion is positioned in a front side of a rear end portion of the duct (10). Further, a ratio of a maximum outer diameter (R2) of the duct (10) with respect to a minimum inner diameter (R1) of the duct (10) is within a range between 2.0 and 4.3.